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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/537,001	EASWAR ET AL.	
	Examiner	Art Unit	
	Yogesh K Aggarwal	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-50 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-50 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 28 March 2000 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "156" has been used to designate both Keyboard and Fixed Storage. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Information Disclosure Statement

2. The information disclosure statement filed 7-22-2002 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Objections

3. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 40-50 been renumbered 41-51.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-13, 17-19 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,067,383 to Taniguchi et al.

Re claim 1 "A method for storing and transmitting image data between occasionally connected devices, the method comprising":

"capturing an image at a sensor of a first device;" reads on Taniguchi (col. 11 lines 49-50 fig. 1).

"storing the image as image data in a memory of the first device;" reads on Taniguchi (col. 12 lines 33-35 fig. 4).

"separating the image data into separate color planes, according to a particular color space;" reads on Taniguchi (col. 11 lines 50-52 fig. 1).

"transforming each of the planes into separate bands, based on frequency information present in each plane;" reads on Taniguchi (col. 11 lines 52-54 fig. 1).

"quantizing each band of each of the planes to a particular bit depth;" reads on Taniguchi (col. 11 lines 54-55 fig. 1).

"coding each band of each of the planes for compressing the image data;" reads on Taniguchi (col. 11 lines 55-57).

"based on quality and resolution provided by each band at a certain bit depth, organizing the bands into a plurality of layers suitable for progressive transmission to a target device;" reads on Taniguchi (col. 1 lines 41-45).

[Also read the abstract where different types of hierarchical coding having a plurality of code layers is explained and then can be transmitted as explained in col. 1 lines 41-45).

"and upon connection of the first device to a second device, transmitting a selected one of said plurality of layers from the first device to the second device" reads on Taniguchi (col. 1 lines 41-45)

[The first device is the camera and the second device can be a computer to which the layers are transmitted by selecting one of the pluralities of layers].

Claim 2 recites "... wherein said particular color space comprises YUV color space" reads on Taniguchi (col. 13 lines 30-32 fig. 4).

Claim 3 recites "... wherein said particular color space comprises RGB color space" reads on Taniguchi (col. 13 lines 28-30 fig. 4).

Claim 4 recites, "... wherein the image data stored in memory comprises mosaic image data" " reads on Taniguchi (col. 13 lines 28-30 fig. 4).

[RGB color space can be a stored in a Bayer pattern, which forms the mosaic data].

Claim 5 recites "...wherein said step of organizing the bands into a plurality of layers comprises:

organizing the bands into a plurality of layers of a quality/resolution matrix" reads on Taniguchi (abstract lines 1-4, col. 22 lines 52-55).

[Col. 22 line 52 says that when sampling is done, resolution is graded according to the quality of the image, so the image has to be stored in the form of quality/resolution matrix).

Claim 6 recites "...wherein said step of organizing the bands into a plurality of layers comprises:"
"selecting one or more particular bands to comprise a given layer, each band being represented to a particular bit depth," reads on Taniguchi (fig. 41(a) and 41(b) show the Y and UV offset coefficients represented with a particular bit depth).

Claim 7 recites "...wherein each layer stores image data for rendering the image at a particular resolution and a particular quality" reads on Taniguchi (shown in Table 1 col. 14).
[Different layers have different sizes, which implies they have different resolutions and hence different quality].

Claim 8 recites "...wherein a first layer of said plurality of layers stores information pertaining a rendering the image at low resolution and low quality" reads on Taniguchi (shown in Table 1 col. 14).
[The first layer C-HH has a size of 500 bytes and therefore lowest resolution and lowest quality].

Claim 9 recites "...wherein said first layer comprises a subset selected from the smallest ones of the bands" reads on Taniguchi (col. 13 lines 60-65).
[C-HH, which has the lowest resolution and quality, is formed by combining U-HH and V-HH which is a subset selected from the smallest ones of the frequency bands].

Claim 10 recites "...wherein said first layer stores each band of said subset only to a particular bit depth" reads on Taniguchi (fig. 43(a) and 43(b) show the Y and UV offset coefficients represented with a particular bit depth).

Claim 11 recites, "...Wherein each layer includes information from all color planes," reads on Taniguchi (col. 14 lines 21-26).

[Since all are separated into different color planes and then combined into different color-layer combination each layer contains information about all color planes.]

Claim 12 recites "...wherein the layers are interdependent" reads on Taniguchi (col. 14 lines 64-67, col. 15 lines 1-10).

[Because the layers having the highest priority need to be stored to get the image quality so the layers are interdependent on each other i.e. one single layer is not enough to get a good image quality].

Claim 13 recites "...wherein the layers are independent" reads on Taniguchi (col. 14 lines 64-67, col. 15 lines 1-10).

[Because some layers are not stored without any degradation in image quality so they are independent of each other].

Claim 17 recites "...wherein said memory comprises a frame buffer for storing image data" reads on Taniguchi (col. 8 lines 27-30).

Claim 18 recites "...wherein said first and second devices are occasionally connected wirelessly" reads on Taniguchi (col. 1 lines 41-45).

[Various kinds of communication lines can be wirelessly connected devices]

Claim 19 recites "...wherein said first and second devices are occasionally connected over a wire line connection" reads on Taniguchi (col. 1 lines 41-45).

[Various kinds of communication lines can be devices connected over a wire line connection].

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi (US Patent No. 6,067,383) in view of Hoffman (US Patent # 5,761,655).

Re Claim 14, Taniguchi fails to teach transmitting attribute information indicating basic features of the image as claimed. However these limitations are well known in the art and obvious as evidenced in Hoffman (col. 9 lines 15-20, col. 2 lines 55-57).

Therefore taking the combined teachings of Taniguchi and Hoffman as a whole, it would have been obvious to one skilled in the art to incorporate transmitting attribute information indicating basic features of the image. Doing so would allow the files to be easily searched as suggested by Hoffman (col. 3 lines 2-5).

[Claim 15]

The method of claim 14, wherein said attribute information includes selected ones of width and height of the image, aperture and exposure time used to capture the image, analog gains of the sensor when the image was captured, and a timestamp for the image (Hoffman, col. 2 lines 55-57).

[This invention solves this problem of recognizing the image w.r.t size, which can be the width and height, age, which is the timestamp of the image, and any other way, which is being claimed].

[Claim 16]

The method of claim 14, wherein said attribute information includes a thumbnail bitmap of the image (Hoffman col. 9 lines 15-2).

8. Claims 20-24,28-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi (US Patent No. 6,067,383) in view of Ferriere et al (US Patent # 5,880,856).

Re Claim 20 Taniguchi fails to teach "...wherein said step of transmitting a selected one of said plurality of layers from the first device to the second device comprises: initially transmitting a first layer of said plurality of layers; and upon reconnection of the two devices at a later point in time, transmitting subsequent layers of said plurality of layers" as claimed. However, these limitations are well known and obvious in the art as evidenced in Ferriere (col. 4 lines 52-57).

[The user can terminate the transfer at any point in time if the image turns out to be undesirable and also reconnected later].

Therefore taking the combined teachings of Taniguchi and Ferriere as a whole, it would have been obvious to one skilled in the art to modify Taniguchi to have initially transmitting a first layer of said plurality of layers; and upon reconnection of the two devices at a later point in time, transmitting subsequent layers of said plurality of layer. Doing so would provide a method of storing and of progressively transferring a still image so that it can be conveniently previewed during the transfer and so that a user can terminate the transfer at an early stage if the image turns out to be undesirable (Ferriere col. 1 lines 43-50).

Re Claim 21, Taniguchi fails to teach disconnecting the two devices; at a later point in time, re-establishing a connection between the two devices; transmitting an additional layer of

said plurality of layers while the two devices are connected; and thereafter disconnecting the two devices as claimed. However these limitations are well known in the art and obvious as evidenced in Ferriere (col. 1 lines 43-50).

[If the image is unusable the user can terminate the connection and retransmit one of the layers, the user ca stop the termination and reconnect it later to transmit a plurality of layers until all the layers are transmitted and thereafter disconnecting the two devices].

Therefore taking the combined teachings of Taniguchi and Ferriere as a whole, it would have been obvious to one skilled in the art to incorporate disconnecting the two devices; at a later point in time, re-establishing a connection between the two devices; transmitting an additional layer of said plurality of layers while the two devices are connected; and thereafter disconnecting the two devices. Doing so would be advantageous because the low-resolution layer can be previewed and the high-resolution layers can be transmitted later as suggested by Ferriere (Col. 9,10 lines 64-67, lines 1-3).

Re Claim 22, Taniguchi fails to teach, "said second device controls which layers are transmitted" as claimed. However these limitations are well known in the art and obvious as evidenced in Ferriere (col.1 Lines 48-50).

[Because the user can terminate the transfer at any point in time if the image turns out to be undesirable which means that the second device i.e. computer can control which layers are transmitted].

Therefore taking the combined teachings of Taniguchi and Ferriere as a whole, it would have been obvious to one skilled in the art to incorporate the said second device controlling which layers are transmitted. Doing so would provide a method so that the user can terminate

the transfer at an early stage if the image turns out to be undesirable as suggested by Ferriere (col. 1 lines 48-50).

Re Claim 23, Taniguchi fails to teach "...wherein said step of organizing the bands into a plurality of layers includes: storing each layer as a record" as claimed. However these limitations are well known in the art and obvious as evidenced in Ferriere (col. 9 lines 45-48 figure 13). [Each row block is like a record].

Therefore taking the combined teachings of Taniguchi and Ferriere as a whole, it would have been obvious to one skilled in the art to incorporate the said step of organizing the bands into a plurality of layers including storing each layer as a record. Doing so would provide his minimizes storage space and also minimizes the recurring processing costs, which would otherwise be necessary, to transform and arrange the image data prior to or during each transfer as suggested by Ferriere (Col. 9 lines 16-19 figure 13).

Re claim 24, wherein each record is stored as a file in a file system of the first device (Ferriere col. 9 lines 19-22 figure 13).

Re claim 28 Taniguchi fails to teach, "... wherein said first device stores information indicating which layers have been transmitted to the second device". However these limitations are well known in the art and obvious as evidenced in Ferriere (col. 1 lines 48-50). [The user can be someone at the first device or the second device and so it is implied and necessitated that both the first device and the second device have access to the information about which layers are transmitted].

Therefore taking the combined teachings of Taniguchi and Ferriere as a whole, it would have been obvious to one skilled in the art to have a first device that stores information

indicating which layers have been transmitted to the second device. Doing so would reduce the image downloading time (col. 1 lines 40-42) and moreover user can terminate the transfer at any point if the image appears to be unusable as suggested by Ferriere (col. 1 lines 48-50).

[Claim 29]

The method of claim 28, wherein said second device has access to said information indicating which layers have been transmitted to the second device (Ferriere, col. 1 lines 48-50). [The user can be someone at the first device or the second device and so it is implied and necessitated that both the first device and the second device have access to the information about which layers are transmitted].

Re claim 30 Taniguchi fails to teach, "... transmitting at least some of the layers to a third device; and thereafter retransmitting the layers at said third device to said second device". However these limitations are well known in the art and obvious as evidenced in Ferriere (col. 1 lines 42-50). [The user can be someone at the first device or the second device and so it is implied and necessitated that the some of the layer information can be requested by a third device and further transmitted to a second device by the third device if requested].

Therefore taking the combined teachings of Taniguchi and Ferriere as a whole, it would have been obvious to one skilled in the art to transmit at least some of the layers to a third device; and thereafter retransmit the layers at said third device to said second device. Doing so would provide more flexibility in the transmission of layers to any device and the bandwidth can be used more efficiently.

Re claim 31 Taniguchi fails to teach, "rendering the image at the second device upon receipt of a first one of said plurality of layers" as claimed. However these limitations are well known in the art and obvious as evidenced in Ferriere (col. 1 lines 44-48).

Therefore taking the combined teachings of Taniguchi and Ferriere as a whole, it would have been obvious to one skilled in the art to incorporate rendering the image at the second device upon receipt of a first one of said plurality of layers. Doing so would reduce the image downloading time (col. 1 lines 40-42) and moreover user can terminate the transfer at any point if the image appears to be unusable as suggested by Ferriere (col. 1 lines 48-50).

Re claim 32 "updating the rendering of the image at the second device upon receipt of subsequent ones of said plurality of layers" reads on Ferriere (col. 1 lines 46-48).

Re Claim 33, Taniguchi fails to teach wherein layers are selected for transmission to first increase quality of the image that may be rendered at the second device as claimed. However these limitations are well known in the art and obvious as evidenced in Ferrier (abstract lines 19-20).

[sharpened images mean better quality].

Therefore taking the combined teachings of Taniguchi and Ferriere as a whole, it would have been obvious to one skilled in the art to incorporate layers selected for transmission to first increase quality of the image that may be rendered at the second device. Doing so would provide a method so that the image can be previewed conveniently during the transfer and so that a user can terminate the transfer if the image is undesirable and ultimately the time can be saved as suggested by Ferriere (col. 1 lines 42-50).

Re Claim 34, Taniguchi fails to teach wherein layers are selected for transmission to

first increase resolution of the image that may be rendered at the second device as claimed. However these limitations are well known in the art and obvious as evidenced in Ferrier (col. 4 lines 64-67 col. 5 lines 1-2).

Therefore taking the combined teachings of Taniguchi and Ferriere as a whole, it would have been obvious to one skilled in the art to incorporate layers selected for transmission to first increase resolution of the image that may be rendered at the second device. Doing so would provide a method so that the image can be previewed conveniently during the transfer and so that a user can terminate the transfer if the image is undesirable and ultimately the time can be saved as suggested by Ferriere (col. 1 lines 48-50).

Re Claim 35, Taniguchi fails to teach that each layer selected for transmission is dependent on only particular layers that have been previously transmitted as claimed. However these limitations are well known in the art and obvious as evidenced in Ferriere (col. 4 lines 15-27).

[The method of Inverse DWT is described and shown how each layer is used to form the composite image i.e. each layer depends upon particular layers].

Therefore taking the combined teachings of Taniguchi and Ferriere as a whole, it would have been obvious to one skilled in the art to incorporate wherein-each layer selected for transmission is dependent on only particular layers that have been previously transmitted. Doing so would provide a method of inverse DWTransform where only particular layers can be used for reconstructing a part of the image as suggested by Ferriere (col. 4 lines 15-17). [The inverse transform is performed recursively at each decomposition level in the opposite order in which the transform is done].

9. Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi (US Patent No. 6,067,383) in view of Ferriere et al (US Patent # 5,880,856) in further view of Davis (US Patent # 6,615,224).

[Claim 25]

Taniguchi and Ferriere fail to teach, "... storing a record directory for accessing a record for a particular layer". However these limitations are well known in the art and obvious as evidenced in Davis (col. 6 lines 32-35 fig. 6).

Therefore taking the combined teachings of Taniguchi, Ferriere and Davis as a whole, it would have been obvious to one skilled in the art to have storing a record directory for accessing a record for a particular layer. Doing so would provide a method for deleting files on a UNIX file system, so that they may subsequently be undeleted, without any possibility of loss or damage (in the abstract).

[Claim 26]

The method of claim 25, wherein said record directory includes a directory entry storing a filename for each record (Davis col.6 lines 38-40)

[Claim 27]

The method of claim 26, Ferriere and Davis fails to teach that "... wherein said second device sets the filename of a record to NULL after that particular record has been transmitted to the second device". Official Notice is taken of the fact that both the concept and advantages of providing a second device that sets the filename of a record to NULL after that particular record has been transmitted are well known and expected in the art. It would have been obvious to have

a second device that sets the filename of a record to NULL (or reset) after that particular record has been transmitted in order to indicate that the particular record has been fetched.

10. Claims 36-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi (US Patent No. 6,067,383) in view of Ferriere et al (US Patent # 5,880,856) in further view of Davis (US Patent # 6,615,224) in further view of Hoffman (US Patent # 5,761,655).

[Claim 36]

A method for storing and transmitting image information for an image from a source device to a target device, the method comprising:

partitioning said image information at the source device into a plurality of layers, based on resolution and quality criteria; (Taniguchi, abstract lines 1-4, col. 22 lines 52-55).

[Col. 22 line 52 says that when sampling is done, resolution is graded according to the quality of the image, so the image has to be stored in the form of quality/resolution matrix).

storing directory information for the image at the source device allowing access to individual ones of said plurality of layers; (Davis col.6 lines 38-40)

when the first device is initially connected to the target device, transmitting attribute information for the image; (Ferriere col. 9 lines 15-20, col. 2 lines 55-57).

Therefore taking the combined teachings of Taniguchi and Hoffman as a whole, it would have been obvious to one skilled in the art to incorporate transmitting attribute information indicating basic features of the image. Doing so would allow the files to be easily searched as suggested by Hoffman (col. 3 lines 2-5).

transmitting at least some of the directory information to the target device, to allow the target device to control uploading of said image information; (Ferriere col. 1 lines 48-50).

and under control of said target device, transmitting selected ones of said plurality of layers from said source device to said target device (Ferriere col. 1 lines 48-50).

[Claim 37]

The method of claim 36, wherein said target device initially selects a single layer for transmission that permits at least crude rendering of the image (Ferriere col. 1, lines 43-46).

[claim 38]

The method of claim 36, wherein said step of transmitting selected ones of said plurality of layers includes: successively fetching layers that allow rendering of the image at increasingly higher resolution (Ferriere col. 1 lines 46-48).

[Claim 39]

The method of claim 36, wherein said step of transmitting selected ones of said plurality of layers includes: successively fetching layers that allow rendering of the image at increasingly higher quality (Ferriere col. 1 lines 46-48, Abstract lines 19-20).

[sharpened images mean better quality].

[Claim 40]

The method of claim 36, wherein said step of transmitting selected ones of plurality of layers includes: occasionally connecting the two devices from time to time; and at each instance that the two devices are connected, transmitting at least one of said plurality of layers from the source device to the target device, until all layers have been transmitted (Ferriere col. 1 lines 43-50).

[If the image is unusable the user can terminate the connection and get it retransmitted later until all the layers are transmitted which implies the devices are occasionally connected].

[Claim 41]

The method of claim 36, wherein said step of transmitting selected ones of said plurality of layers includes: connecting the two devices via wireless communication medium; and while the two devices are connected via wireless communication medium, transmitting a first one of said plurality of layers from the source device to the target device (Ferriere col. 9 lines 64-67).

[low speed communication links can be wireless links, which have limited bandwidth unlike the wire, line connection and are therefore slow].

[Claim 42]

The method of claim 41, further comprising: connecting the two devices via wire line communication medium; and while the two devices are connected via wire line communication medium, transmitting subsequent ones of said plurality of layers from the source device to the target device, until all layers have been transmitted (Ferriere col. 5 lines 26-30, col. 9 lines 64-67, col. 10 lines 1-3).

[Claim 43]

The method of claim 36, wherein said first device includes an imaging device (Taniguchi col. 11 lines 49-50 fig. 1).

[Because this is an original image so the first device is an imaging device, which captures the original image].

[Claim 44]

The method of claim 36, wherein said second device includes a computer (Ferriere, col. 1 lines 15-20).

[Claim 45]

The method of claim 44, wherein said computer includes a selected one of a desktop computer and a server computer (Ferriere col. 1 lines 15-20, 33-35).

[For downloading images on-line the desktop computer has the ISP's computer as a server computer].

[Claim 46]

The method of claim 44, wherein said computer includes Internet connectivity (Ferriere col. 1 lines 15-20, lines 33-35).

[downloading images with a modem implies Internet connectivity].

12. Claims 47-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi (US Patent No. 6,067,383) in view of Ferriere et al (US Patent # 5,880,856) in further view of Davis (US Patent # 6,615,224).

[Claim 47]

A system providing a file format optimized for transmission of information between intermittently-connected devices, the system comprising:

a memory for storing image data; (Taniguchi figure 1 shows 7 as the code storage means).

logic for partitioning said image data into successive layers, wherein each successive layer storing information that permits rendering of the image at increasingly higher resolution and/or increasingly higher quality; (Ferrier, col. 4 lines 64-67 co. 5 lines 1-2).

logic for storing said successive layers in a file format, said file format comprising: (Ferriere, col. 9 lines 19-27)

a plurality of records, each record storing information for a single layer (Ferriere, col. 9 lines 45-48). [Each row block is like a record].

and a directory for accessing a record of a layer that is to be uploaded to a destination device. However these limitations are well known in the art and obvious as evidenced in Davis (col. 6 lines 32-35 fig. 6).

Therefore taking the combined teachings of Taniguchi, Ferriere and Davis as a whole, it would have been obvious to one skilled in the art to have storing a record directory for accessing a record for a particular layer. Doing so would provide a method for deleting files on a UNIX file system, so that they may subsequently be undeleted, without any possibility of loss or damage (Davis, in the abstract).

and logic allowing a destination device to control uploading of successive layers to the destination device (Ferriere, col. 1 lines 48-50). [Because the user can terminate the transfer at any point in time if the image turns out to be undesirable which means that the second device i.e. computer can control which layers are transmitted].

[Claim 49]

The system of claim 46, wherein each record exists as a physical record corresponding to a file within a file system (Ferriere col. 9 lines 42-44).

[Each row block is like a physical record.]

[Claim 51]

The system of claim 46, wherein said directory is modified after uploading of a layer, for indicating that that layer has been successfully uploaded. Official Notice is taken of the fact that both the concept and advantages of providing a modifying a directory to NULL are well known and expected in the art. It would have been obvious to modify a directory to NULL (or reset) after that particular directory has been transmitted in order to indicate that the particular record has been fetched or uploaded by the second device.

13. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi (US Patent No. 6,067,383) in view of Ferriere et al (US Patent # 5,880,856) in further view of Davis (US Patent # 6,615,224) in further view of Hoffman (US Patent # 5,761,655).

Re Claim 48, Taniguchi in view of Ferriere in further view of Davis fails to teach wherein said file format includes a header section storing attribute information for the image as claimed. However these limitations are well known in the art and obvious as evidenced in (Hoffman, col.18 lines 44-46 fig. 35A).

Therefore taking the combined teachings of Taniguchi in view of Ferriere in further view of Davis and Hoffman as a whole, it would have been obvious to one skilled in the art to incorporate wherein said file format includes a header section storing attribute information for the image Doing so would provide index node memory caching to minimize disk access as suggested by Hoffman (col. 18 lines 42-44).

14. Claim 50 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi (US Patent No. 6,067,383) in view of Ferriere et al (US Patent # 5,880,856) in further view of Davis (US Patent # 6,615,224) in further view of Pratt (US PG-PUB 2001/0049693).

Re Claim 50, Taniguchi in view of Ferriere in further view of Davis fails to teach wherein each record exists as a logical record residing at a particular offset within a single binary object as claimed. However these limitations are well known in the art and obvious as evidenced in (Pratt, paragraph 33 and 46).

Therefore taking the combined teachings of Taniguchi in view of Ferriere in further view of Davis and Pratt as a whole, it would have been obvious to one skilled in the art to incorporate each record existing as a logical record residing at a particular offset within a single binary object. Doing so would provide a structure and method for storing chip data in database tables as BLOB as suggested by Pratt (Paragraph 11).

15. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,154,493 to Acharya et al.

Re claim 1 "A method for storing and transmitting image data between occasionally connected devices, the method comprising":

"capturing an image at a sensor of a first device;" reads on Acharya (col. 2 lines 34-36 fig. 1 and 7).

"storing the image as image data in a memory of the first device;" reads on Acharya (col. 3 lines 7-9 fig 8 shows the memory unit 834).

"separating the image data into separate color planes, according to a particular color space;" reads on Acharya (col. 3 lines 14-16).

"transforming each of the planes into separate bands, based on frequency information present in each plane;" reads on Acharya (col. 4 lines 58-60 fig. 4).

"quantizing each band of each of the planes to a particular bit depth;" reads on Acharya (col. 4 lines 62-67 col. 5 lines 1-2).

"coding each band of each of the planes for compressing the image data;" reads on Acharya (col. 5 lines 7-8).

"based on quality and resolution provided by each band at a certain bit depth, organizing the bands into a plurality of layers suitable for progressive transmission to a target device;" reads on Acharya (col. 6 lines 17-19).

"and upon connection of the first device to a second device, transmitting a selected one of said plurality of layers from the first device to the second device" reads on Acharya (col. 5 lines 7-13) [The first device is the camera and the second device can be a computer to which the layers are transmitted by selecting one of the pluralities of layers].

Claim 2 recites "... wherein said particular color space comprises YUV color space" reads on Acharya (col. 8 lines 55-57 fig. 8).

Claim 3 recites "... wherein said particular color space comprises RGB color space" reads on Acharya (col. 2 lines 42-44).

Claim 4 recites, "... wherein the image data stored in memory comprises mosaic image data" " reads on Acharya (abstract).

[RGB color space can be a stored in a Bayer pattern, which forms the mosaic data].

Claim 5 recites "...wherein said step of organizing the bands into a plurality of layers comprises:

organizing the bands into a plurality of layers of a quality/resolution matrix" reads on Acharya (col. 4 lines 25-28).

[When the pixels are compressed they are transformed into different layers of a resolution/quality matrix].

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Matsuura (US Patent # 6459816)
- Yamaguchi (US PG-PUB # 2001/0007107) discloses a record having a fixed length data portion and a variable portion stored in memory units.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yogesh K Aggarwal whose telephone number is (703) 308-9644. The examiner can normally be reached on M-F 8:00AM-4: 30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew B Christensen can be reached on (703) 308-9644. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

YKA

VU LE
PRIMARY EXAMINER